Off-road precautions

This vehicle belongs to the utility vehicle class, which has higher ground clearance and narrower tread in relation to the height of its center of gravity to make it capable of performing in a wide variety of off-road applications.

Off-road vehicle feature

- Specific design characteristics give it a higher center of gravity than ordinary passenger cars. This vehicle design feature causes this type of vehicle to be more likely to rollover. And, utility vehicles have a significantly higher rollover rate than other types of vehicles.
- An advantage of the higher ground clearance is a better view of the road allowing you to anticipate problems.
- It is not designed for cornering at the same speeds as ordinary passenger cars any more than low-slung sports cars designed to perform satisfactorily under off-road conditions. Therefore, sharp turns at excessive speeds may cause rollover.

CAUTION

■ **Off-road vehicle precautions**

Always observe the following precautions to minimize the risk of serious personal injury or damage to your vehicle:

- In a rollover crash, an unbelted person is significantly more likely to die than a person wearing a seat belt. Therefore, the driver and all passengers should fasten their seat belts whenever the vehicle is moving.
- Avoid sharp turns or abrupt maneuvers, if at all possible.
  Failure to operate this vehicle correctly may result in loss of control or vehicle rollover causing death or serious injury.
- Loading cargo on the roof luggage carrier will make the center of the vehicle gravity higher. Avoid high speeds, sudden starts, sharp turns, sudden braking or abrupt maneuvers, otherwise it may result in loss of control or vehicle rollover due to failure to operate this vehicle correctly.
- Always slow down in gusty crosswinds. Because of its profile and higher center of gravity, your vehicle is more sensitive to side winds than an ordinary passenger car. Slowing down will allow you to have better control.
- Do not drive horizontally across steep slopes. Driving straight up or straight down is preferred. Your vehicle (or any similar off-road vehicle) can tip over sideways much more easily than forward or backward.

Off-road driving

When driving your vehicle off-road, please observe the following precautions to ensure your driving enjoyment and to help prevent the closure of areas to off-road vehicles.

- Drive your vehicle only in areas where off-road vehicles are permitted to travel.
- Respect private property. Get owner's permission before entering private property.
- Do not enter areas that are closed. Honor gates, barriers and signs that restrict travel.
- Stay on established roads. When conditions are wet, driving techniques should be changed or travel delayed to prevent damage to roads.

Additional information for off-road driving

▶ For owners in U.S. mainland, Hawaii and Puerto Rico:

To obtain additional information pertaining to driving your vehicle off-road, consult the following organizations.

- State and Local Parks and Recreation Departments
- State Motor Vehicle Bureau
- Recreational Vehicle Clubs
- U.S. Forest Service and Bureau of Land Management

CAUTION

Off-road driving precautions

Always observe the following precautions to minimize the risk of serious personal injury or damage to your vehicle:

- Drive carefully when off the road. Do not take unnecessary risks by driving in dangerous places.
- Do not grip the steering wheel spokes when driving off-road. A bad bump could jerk the wheel and injure your hands. Keep both hands and especially your thumbs on the outside of the rim.
- Always check your brakes for effectiveness immediately after driving in sand, mud, water or snow.
- After driving through tall grass, mud, rock, sand, rivers, etc., check that there is no grass, bush, paper, rags, stone, sand, etc. adhering or trapped on the underbody. Clear off any such matter from the underbody. If the vehicle is used with these materials trapped or adhering to the underbody, a breakdown or fire could occur.
- When driving off-road or in rugged terrain, do not drive at excessive speeds, jump, make sharp turns, strike objects, etc. This may cause loss of control or vehicle rollover causing death or serious injury. You are also risking expensive damage to your vehicle's suspension and chassis.

NOTICE

To prevent the water damage

Take all necessary safety measures to ensure that water damage to the engine or other components does not occur.

- Water entering the engine air intake will cause severe engine damage.
- Water entering the automatic transmission will cause deterioration in shift quality, locking up of your transmission accompanied by vibration, and ultimately damage.
- Water can wash the grease from wheel bearings, causing rusting and premature failure, and may also enter the differentials, transmission and transfer case, reducing the gear oil's lubricating qualities.

NOTICE

■ **When you drive through water**

If driving through water, such as when crossing shallow streams, first check the depth of the water and the bottom of the river bed for firmness. Drive slowly and avoid deep water.

■ **Inspection after off-road driving**

- Sand and mud that has accumulated in brake drums and around brake discs may affect braking efficiency and may damage brake system components.
- Always perform a maintenance inspection after each day of off-road driving that has taken you through rough terrain, sand, mud, or water. For scheduled maintenance information, refer to the “Warranty and Services Guide/Owner’s Manual Supplement/Scheduled Maintenance”.

Cargo and luggage

Take notice of the following information about storage precautions, cargo capacity and load.

- Stow cargo and luggage in the luggage compartment whenever possible. Be sure all items are secured in place.
- Be careful to keep the vehicle level. Placing the weight as far forward as possible helps maintain vehicle balance.
- For better fuel economy, do not carry unnecessary weight.

Capacity and distribution

Cargo capacity depends on the total weight of the occupants.

(Cargo capacity) = (Total load capacity) – (Total weight of occupants)

Steps for Determining Correct Load Limit—

(1) Locate the statement "The combined weight of occupants and cargo should never exceed XXX kg or XXX lbs." on your vehicle's placard.

(2) Determine the combined weight of the driver and passengers that will be riding in your vehicle.

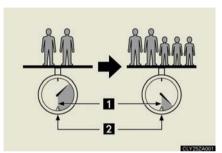
(3) Subtract the combined weight of the driver and passengers from XXX kg or XXX lbs.

(4) The resulting figure equals the available amount of cargo and luggage load capacity.

For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400 – 750 (5 × 150) = 650 lbs.)

(5) Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.

(6)If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle. Consult this manual to determine how this reduces the available cargo and luggage load capacity of your vehicle.

Example on your vehicle

1 Cargo capacity

2 Total load capacity

When 2 people with the combined weight of 366 lb. (166 kg) are riding in your vehicle, which has a total load capacity of 925 lb. (420 kg), the available amount of cargo and luggage load capacity will be as follows:

925 lb. – 366 lb. = 559 lb. (420 kg –166 kg = 254 kg)

In this condition, if 3 more passengers with the combined weight of 388 lb. (176 kg) get on, the available cargo and luggage load will be reduced as follows:

559 lb. – 388 lb. = 171 lb. (254 kg – 176 kg = 78 kg)

As shown in the above example, if the number of occupants increases, the cargo and luggage load equaling the combined weight of the occupants who got on later, by an amount. In other words, if an increase in the number of occupants causes an excess of the total load capacity (combined weight of occupants plus cargo and luggage load), you must reduce the cargo and luggage on your vehicle.

⚠ CAUTION

n Things that must not be carried in the luggage compartment

The following things may cause a fire if loaded in the luggage compartment.

- Receptacles containing gasoline
- Aerosol cans

n Storage precautions

- Do not place anything on the luggage cover, and do not stack anything in the luggage compartment higher than the seatbacks.
  Such items may be thrown about and possibly injure people in the vehicle during sudden braking or in an accident.
- Do not place cargo or luggage in or on the following locations as the item may get under the brake or accelerator pedal and prevent the pedals from being depressed properly, block the driver's vision, or hit the driver or passengers, causing an accident.
  - Driver's feet
  - Front passenger or rear seats (when stacking items)
  - Luggage cover
  - Instrument panel
  - Dashboard
  - Auxiliary box or tray that has no lid
- Secure all items in the occupant compartment, as they may shift and injure someone during an accident or sudden braking.
- Never allow anyone to ride in the luggage compartment. It is not designed for passengers. They should ride in their seats with their seat belts properly fastened. Otherwise, they are much more likely to suffer serious bodily injury, in the event of sudden braking or a collision.

n Capacity and distribution

- Do not exceed the maximum axle weight rating or the total vehicle weight rating.
- Even if the total load of occupant's weight and the cargo load is less than the total load capacity, do not apply the load unevenly.
  Improper loading may cause deterioration of steering or braking control which may cause death or serious injury.

Vehicle load limits

Vehicle load limits include total load capacity, seating capacity, towing capacity and cargo capacity.

■ Total load capacity: 925 lb. (420 kg)

Total load capacity means the combined weight of occupants, cargo and luggage.

■ Seating capacity: 5 occupants (Front 2, Rear 3)

Seating capacity means the maximum number of occupants whose estimated average weight is 150 lb. (68 kg) per person.

■ Towing capacity
Without towing package: 2000 lb. (907 kg)
With towing package: 3500 lb. (1588 kg)

Towing capacity means the maximum gross trailer weight (trailer weight plus its cargo weight) that your vehicle is able to tow.

■ Cargo capacity

Cargo capacity may increase or decrease depending on the weight and the number of occupants.

■ Total load capacity and seating capacity

These details are also described on the tire and loading information label. (→P. 340)

⚠ CAUTION

■ Overloading the vehicle

Do not overload the vehicle.
It may not only cause damage to the tires, but also degrade steering and braking ability, resulting in an accident.

Winter driving tips

Carry out the necessary preparations and inspections before driving the vehicle in winter. Always drive the vehicle in a manner appropriate to the prevailing weather conditions.

Pre-winter preparations

- Use fluids that are appropriate to the prevailing outside temperatures.
  - Engine oil
  - Engine coolant
  - Washer fluid
  - Have a service technician inspect the level and specific gravity of battery electrolyte.
- Have the vehicle fitted with four snow tires or purchase a set of tire chains for the front tires.

  Ensure that all tires are the same size and brand, and that chains match the size of the tires.
- Tire pressure falls in winter as the outside temperature falls. Add 2.9 to 4.3 psi (20 to 30 kPa, 0.2 to 0.3 kgf/cm^2 or bar) to the standard tire inflation pressure.

■ **Before driving the vehicle**

Perform the following according to the driving conditions.

- Do not try to forcibly open a window or move a wiper that is frozen. Pour warm water over the frozen area to melt the ice. Wipe away the water immediately to prevent it from freezing.
- To ensure proper operation of the climate control system fan, remove any snow that has accumulated on the air inlet vents in front of the windshield.
- Remove any ice that has accumulated on the vehicle chassis.
- Periodically check for and remove any excess ice or snow that may have accumulated in the wheel well or on the brakes.

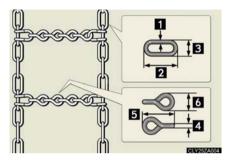
■ **When driving the vehicle**

Accelerate the vehicle slowly and drive at a reduced speed suitable to road conditions.

■ **When parking the vehicle**

Park the vehicle and move the shift lever to P without setting the parking brake. The parking brake may freeze up, preventing it from being released.

Selecting snow chains

Use the correct snow chain size when mounting the snow chains. Chain size is regulated for each tire sizes.

Side chain

1 0.12 in. (3 mm) in diameter
2 1.18 in. (30 mm) in length
3 0.39 in. (10 mm) in width

Cross chain

4 0.16 in. (4 mm) in diameter
5 0.98 in. (25 mm) in length
6 0.55 in. (14 mm) in width

Regulations on the use of snow chains

- Regulations regarding the use of tire chains vary according to location and type of road. Always check local regulations before installing chains.
- Install the chains on the front tires.
- Retighten the chains after driving 1/4 - 1/2 mile (0.5 - 1.0 km).

Tire chain installation

Observe the following precautions when installing and removing chains.

- Install and remove tire chains in a safe location.
- Install tire chains on the front tires only. Do not install tire chains on rear tires.
- Install tire chains following the instructions provided in the accompanying instructions.

CAUTION

Driving with snow tires

Observe the following precautions to reduce the risk of accidents.
Failing to do so may result in a loss of vehicle control and cause death or serious injury.

- Use tires of the size specified for your vehicle.
- Maintain the recommended level of air pressure.
- Do not drive in excess of 75 mph (120 km/h), regardless of the type of snow tires being used.
- Use snow tires on all, not just some wheels.

Driving with tire chains

Observe the following precautions to reduce the risk of accidents.
Failing to do so may result in the vehicle being unable to be driven safely, and may cause death or serious injury.

- Do not drive in excess of the speed limit specified for the tire chains being used, or 30 mph (50 km/h), whichever is lower.
- Avoid driving on bumpy road surfaces or over potholes.
- Avoid sudden turns and braking, as use of chains may adversely affect vehicle handling.
- Slow down sufficiently before entering a curve to ensure that vehicle control is maintained.

NOTICE

- **Repairing or replacing snow tires**

  Request repairs of and obtain replacement snow tires from Lexus dealers or legitimate tire retailers.
  This is because the removal and attachment of snow tires affects the operation of the tire air pressure sensor.

- **Fitting tire chains**

  The tire air pressure sensor may not function correctly when tire chains are fitted.

Trailer towing

Your vehicle is designed primarily as a passenger-and-load carrying vehicle. Towing a trailer will have an adverse effect on handling, performance, braking, durability, and fuel consumption. For your safety and the safety of others, do not overload the vehicle or trailer.

Lexus warranties do not apply to damage or malfunction caused by towing a trailer for commercial purposes.

Weight limits

Confirm that the total trailer weight, gross vehicle weight, gross axle weight and trailer tongue load are all within the limits.

Gross vehicle weight

The gross vehicle weight must not exceed the Gross Vehicle Weight Rating (GVWR) indicated on the Certification Label. The gross vehicle weight is the sum weight of the unloaded vehicle, driver, passengers, luggage, hitch and trailer tongue load. Also included is the weight of any special equipment installed on your vehicle.

Gross axle weight

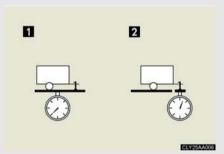
The load on either the front or rear axle resulting from distribution of the gross vehicle weight on both axles must not exceed the Gross Axle Weight Rating (GAWR) listed on the Certification Label.

Certification Label

Trailer tongue load

The trailer cargo load should be distributed so that the tongue load is 9 to 11% of the total trailer weight, not exceeding the following.

Without towing package: 200 lb. (90 kg)
With towing package: 350 lb. (158 kg)
(Tongue load / Total trailer weight x 100 = 9 to 11%)

The total trailer weight and tongue load can be measured with platform scales found at a highway weighing stations, building supply companies, trucking companies, junk yards, etc.

1 Total trailer weight
2 Tongue load

Towing a trailer

Contact your Lexus dealer for further information about additional requirements such as a towing kits, etc.

Hitch and tow hitch receiver

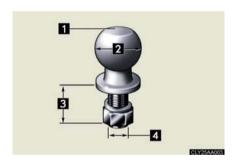
Hitch

Trailer hitch assemblies have different weight capacities established by the hitch manufacturer. Even though the vehicle may be rated for towing a higher weight, the operator must never exceed the maximum weight rating specified for the trailer hitch.

Tow hitch receiver

A tow hitch receiver installed under the rear bumper is rated for weight that does not exceed the vehicle's total towing weight.

Selecting trailer ball

Use the correct trailer ball for your application.

1. Trailer ball load rating

   Matches or exceeds the gross trailer weight rating of the trailer.

2. Ball diameter

   Matches the size of the trailer coupler. Most couplers are stamped with the required trailer ball size.

3. Shank length

   Protrudes beyond the bottom of the lock washer and nut at least 2 threads.

4. Shank diameter

   Matches the ball mount hole diameter size.

Connecting trailer lights

▶ With tow hitch receiver

Use the socket located under the rear bumper.

▶ Without tow hitch receiver

Use the wire harness stored in the rear end under body.

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n **When connecting and disconnecting a trailer (vehicles with electrically modulated air suspension)**

▶ Connecting

STEP 1 Set the electronically modulated air suspension to LO mode.

STEP 2 Turn off the engine switch or the electronically modulated air suspension.

STEP 3 Connect the trailer.

STEP 4 Turn on the switch that was turned off on step 2.

STEP 5 Set the electronically modulated air suspension to N mode.

▶ Disconnecting

STEP 1 Set the electronically modulated air suspension to LO mode.

STEP 2 Turn off the electronically modulated air suspension.

STEP 3 Turn off the engine switch.

STEP 4 Set the supporting leg of the trailer on the ground and raise the hitch by 4 in. (100 mm)

STEP 5 Turn on the engine switch.

STEP 6 Turn on the electronically modulated air suspension.

STEP 7 Wait until vehicle height is stabilized.

Make sure the hitch is disconnected. If the hitch does not disconnect, raise the hitch higher and repeat steps 2 through 7.

- **Before towing**

  Check that the following conditions are met:

  - The vehicle's tires are properly inflated. (→P. 340)
  - Trailer tires are inflated according to the trailer manufacturer's recommendation.
  - All trailer lights work
  - All lights work each time you connect them.
  - The trailer ball is set up at the proper height for the coupler on the trailer.
  - The vehicle remains level when a loaded or unloaded trailer is hitched. Do not drive if the vehicle is not level, and check for improper tongue load, overloading, worn suspension, or other possible causes.
  - The trailer cargo is securely loaded.
  - The rear view mirrors conform to all applicable federal, state/provincial or local regulations. If they do not, install rear view mirrors appropriate for towing purposes.

- **Break-in schedule**

  Lexus recommends that you do not use a new vehicle or a vehicle with any new power train components (engine, transmission, differential, wheel bearings, etc.) to tow a trailer for the first 500 miles (800 km) of driving.

- **Maintenance**

  - If you tow a trailer, your vehicle will require more frequent maintenance due to the additional load. (See “Warranty and Services Guide/ Owner's Manual Supplement/ Scheduled Maintenance”.)
  - Retighten the fixing bolts of the towing ball and bracket after approximately 600 miles (1000 km) of trailer towing.

CAUTION

To avoid accident or injury

- The total trailer weight (trailer weight plus the weight of cargo) must not exceed the following.
  Without towing package: 2000 lb. (907 kg)
  With towing package: 3500 lb. (1588 kg)
- If a trailer and cargo weigh over 2000 lb. (907 kg), use a sway control device with sufficient capacity.
- The gross combined weight (sum of your vehicle weight plus its load and the total trailer weight) must not exceed the following.
  Without towing package: 7265 lb. (3295 kg)
  With towing package: 8765 lb. (3976 kg)
- Do not exceed the trailer hitch assembly weight, gross vehicle weight, gross axle weight and trailer tongue load capacities.
- Never load more weight in the back than in the front of the trailer. About 60% of the load should be in the front half of the trailer, and the remaining 40% in the rear.
- Vehicles with electronically modulated air suspension, set the vehicle height to the LO mode and turn off the electronically modulated air suspension to prevent the vehicle height from automatically changing.
- The tow hitch receiver installed on your vehicle must never be used on another vehicle.

Hitches

- If you wish to install a trailer hitch, contact your Lexus dealer.
- Use only a hitch that conforms to the total trailer weight requirement.
- Follow the directions supplied by the hitch manufacturer.
- Lubricate the hitch ball with a light coat of grease.
- Remove the trailer hitch whenever you are not towing a trailer. After removing the hitch, seal any mounting hole in the vehicle body to prevent entry of any substances into the vehicle.

CAUTION

When towing a trailer

- If the total trailer weight exceeds 1000 lb. (450 kg), trailer brakes are required.
- Never tap into your vehicle's hydraulic system, as this will lower the vehicle's braking effectiveness.
- Never tow a trailer without using a safety chain securely attached to both the trailer and the vehicle. If damage occurs to the coupling unit or hitch ball, there is danger of the trailer wandering into another lane.

NOTICE

When installing a trailer hitch

- Use only the position recommended by your Lexus dealer. Do not install the trailer hitch on the bumper; this may cause body damage.
- Do not use axle-mounted hitches, as they can cause damage to the axle housing, wheel bearings, wheels or tires.

Brakes

Lexus recommends trailers with brakes that conform to all applicable federal and state/provincial regulations.

Safety chain

A safety chain must always be used between the towing vehicle and the trailer. Leave sufficient slack in the chain for turns. The chain should cross under the trailer tongue to prevent the tongue from dropping to the ground in the case that it becomes damaged or separated. For the correct safety chain installation procedure, ask your Lexus dealer.

Do not directly splice trailer lights

Directly splicing trailer lights may damage your vehicle's electrical system and cause a malfunction.

Trailer towing tips

Your vehicle will handle differently when towing a trailer. The 3 main causes of vehicle-trailer accidents are driver error, excessive speed and improper trailer loading. Keep the following in mind when towing.

- Before starting out, check the trailer lights and the vehicle-trailer connections. Recheck after driving a short distance.
- Practice turning, stopping and reversing with the trailer attached in an area away from traffic until you become accustomed to the feel of the vehicle.
- Reversing with a trailer attached is difficult and requires practice. Grip the bottom of the steering wheel and move your hand to the left to move the trailer to the left. Move your hand to the right to move the trailer to right. (This is generally opposite to reversing without a trailer attached.) Avoid sharp or prolonged turning. Have someone guide you when reversing to reduce the risk of an accident.
- As stopping distance is increased when towing a trailer, vehicle-to-vehicle distance should be increased. For each 10 mph (16 km/h) of speed, allow at least one vehicle and trailer length.
- Avoid sudden braking as you may skid, resulting in jackknifing and loss of control. This is especially true on wet or slippery surfaces.
- Avoid jerky starts or sudden acceleration.
- Avoid jerky steering and sharp turns, and slow down before making turns.
- Note that when making a turn, the trailer wheels will be closer than the vehicle wheels to the inside of the turn. Compensate by making a larger than normal turning radius.

- Crosswinds and rough roads will adversely affect handling of your vehicle and trailer, causing sway. Periodically check the rear to prepare for being passed by large trucks or buses, which may cause your vehicle and trailer to sway. If swaying occurs, firmly grip the steering wheel, reduce speed immediately but gradually, and steer straight ahead. Never increase speed. If you make no extreme correction with the steering or brakes, your vehicle and trailer will stabilize.
- Take care when passing other vehicles. Passing requires considerable distance. After passing a vehicle, do not forget the length of your trailer, and be sure you have plenty of room before changing lanes.
- In order to maintain efficient engine braking and electrical charging performance, do not use overdrive. Transmission shift range position must be in 4, in the S mode.
- Due to the added load of the trailer, your vehicle's engine may overheat on hot days (at temperatures over 85°F [30°C]) when driving up a long or steep grade. If the engine coolant temperature gauge indicates overheating, immediately turn off the air conditioning (if in use), pull your vehicle off the road and stop in a safe spot. (→P. 418)
- Always place wheel blocks under both the vehicle and the trailer wheels when parking. Apply the parking brake firmly, and put the transmission in P. Avoid parking on a slope, but if unavoidable, do so only after performing the following:

STEP 1 Apply the brakes and keep them applied.

STEP 2 Have someone place wheel blocks under both the vehicle and trailer wheels.

STEP 3 When the wheel blocks are in place, release the brakes slowly until the blocks absorb the load.

STEP 4 Apply the parking brake firmly.

STEP 5 Shift into P and turn off the engine.

- When restarting after parking on a slope:

STEP 1 With the transmission in the P position, start the engine. Be sure to keep the brake pedal pressed.

STEP 2 Shift into 3, 2, 1, or the R position (if reversing).

STEP 3 Release the parking brake and brake pedal, and slowly pull or back away from the wheel blocks. Stop and apply the brakes.

STEP 4 Have someone retrieve the blocks.

CAUTION

To avoid an accident

- Do not exceed 45 mph (72 km/h) or the posted towing speed limit, whichever is lower. As instability (swaying) of the towing vehicle-trailer combination increases as speed increases, exceeding 45 mph (72 km/h) may cause loss of control.
- Slow down and downshift before descending steep or long downhill grades. Do not make sudden downshifts.
- Avoid holding the brake pedal down too long or applying the brakes too frequently.
  This could cause the brakes to overheat and result in reduced braking efficiency.

Dinghy towing

Your vehicle is not designed to be dinghy towed (with 4 wheels on the ground) behind a motor home.

NOTICE

n **To avoid serious damage to your vehicle**

Do not tow your vehicle with four wheels on the ground.